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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/821,537

03/28/2001

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09/18/2008

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ART UNIT

PAPER NUMBER

2152

MAIL DATE

DELIVERY MODE

09/18/2008

PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* RANDALL K. CUREY, DANIEL A. TAZARTES,  
KENT T. BANNO, and JOHN G. MARK

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Appeal 2007-3608  
Application 09/821,537<sup>1</sup>  
Technology Center 2100

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Decided: September 18, 2008

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Before LANCE LEONARD BARRY, JAY P. LUCAS, and  
CAROLYN D. THOMAS, *Administrative Patent Judges*.

THOMAS, C., *Administrative Patent Judge*.

DECISION ON APPEAL

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<sup>1</sup> Application filed March 28, 2001. The real party in interest is Northrop Grumman Corporation.

## I. STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from a non-final rejection of claims 1-49 mailed October 22, 2004, which are all the claims remaining in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

### A. INVENTION

Appellants invented a method and apparatus for repetitively executing a plurality of software packages at a plurality of rates utilizing a common set of computational resources. The method consists of counting contiguous time increments. Each software package is executed during each time increment in one or more sequence of time increments. The time increments assigned to one software package does not overlap the time increments assigned to any other of the plurality of software packages. (Abstract.)

### B. ILLUSTRATIVE CLAIMS

The appeal contains claims 1-49. Claims 1 and 26 are independent claims. Claim 1 is illustrative:

1. A method for repetitively executing a plurality of software packages at one or more rates, utilizing a common set of computational resources, the method comprising the steps:

- generating a sequence of time intervals for each of the plurality of software packages, the time intervals belonging to one software package not overlapping the time intervals belonging to any other of the plurality of software packages;

executing a plurality of software packages, each software package being executed during the time intervals of its sequence of time intervals.

#### C. REFERENCE

The sole reference relied upon by the Examiner in rejecting the claims on appeal is as follows:

Blum	US 4,109,311	Aug. 22, 1978
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#### D. REJECTIONS

The Examiner entered the following rejections which are before us for review:

(1) Claims 1-49 are rejected under 35 U.S.C. § 112, 2<sup>nd</sup> paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention;

(2) Claims 1, 8, 23, 25, 26, 33, and 48 are rejected under 35 U.S.C. § 102(b) as being anticipated by Blum; and

(3) Claims 10, 11, 13, 14, 18, 35, 36, 38, 39, and 43 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Blum.

## II. PROSECUTION HISTORY

Appellants appealed from the non-final Rejection and filed a Fourth Amendment to Revised Supplemental Appeal Brief<sup>2</sup> (4<sup>th</sup> App. Br.) on September 29, 2006. The Examiner mailed an Examiner's Answer (Ans.) on December 13, 2006. Appellants filed a Reply Brief (Reply Br.) on February 8, 2007.

## III. ISSUES

Whether Appellants have shown that the claims are not indefinite; and whether Appellants have shown that the Examiner erred in rejecting the claims as being anticipated by and/or obvious over Blum.

## IV. FINDINGS OF FACT

The following findings of fact (FF) are supported by a preponderance of the evidence.

### *Blum*

1. Blum discloses in Fig. 7 “that each time slice cycle is subdivided into six time slice intervals and that the control storage 26 includes three different programs which need to be executed. . . . Thus, each program is

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<sup>2</sup> We rely on and refer to the Brief filed September 29, 2006 (4<sup>th</sup> App. Br.), in lieu of the previously filed three Briefs because the latter were all defective and not considered in deciding this appeal.

served twice during the assumed six slice time slice cycle.” (Col. 6, ll. 44-52.)

2. Blum discloses that “[a]n address local storage 30 is provided to enable the time slicing of a plurality of different programs . . . Address local storage 30 includes a plurality of instruction address registers (IAR 0, IAR 1, etc.) . . . A separate instruction address register (IAR) is provided for each microprogram in the control storage 26.” (Col. 4, ll. 14-22.)

3. Blum discloses “multiple programs or tasks are performed in a concurrent manner by means of a time slice mechanism which causes the instructions from the different programs to be executed in an interleaved manner.” (Abstract.)

## V. PRINCIPLES OF LAW

### *Relating to Indefiniteness*

“The legal standard for definiteness is whether a claim reasonably apprises those of skill in the art of its scope.” *In re Warmerdam*, 33 F.3d 1354, 1361 (Fed. Cir. 1994) (citing *Amgen Inc. v. Chugai Pharmaceutical Co. Ltd.*, 927 F.2d 1200, 1217 (Fed. Cir.1991)). The “inquiry therefore is merely to determine whether the claims do, in fact, set out and circumscribe a particular area with a reasonable degree of precision and particularity.” *In re Moore*, 439 F.2d 1232, 1235 (CCPA 1971). “[T]he definiteness of the language employed must be analyzed - not in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as

it would be interpreted by one possessing the ordinary level of skill in the pertinent art.” *Id.*

*Relating to Intended Use*

“Generally, ... the preamble does not limit the claims.” *DeGeorge v. Bernier*, 768 F.2d 1318, 1322 n.3 (Fed. Cir. 1985). In particular, “[t]he preamble of a claim does not limit the scope of the claim when it merely states a purpose or intended use of the invention.” *In re Paulsen*, 30 F.3d 1475, 1479 (Fed. Cir. 1994) (citing *DeGeorge*, 768 F.2d at 1322 n.3). “Where ... the effect of the words [in the preamble] is at best ambiguous ... a compelling reason must exist before the language can be given weight.” *Arshal v. United States*, 621 F.2d 421, 431 (Ct. Cl. 1980) (citing *In re de Castelet*, 562 F.2d 1236, 1244 n.6 (CCPA 1977)).

An intended use of a claimed device does not limit the scope of the claim. *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997) (product claim’s intended use recitations not given patentable weight); *see also Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp.*, 320 F.3d 1339, 1345 (Fed. Cir. 2003) (“An intended use or purpose usually will not limit the scope of the claim because such statements usually do no more than define a context in which the invention operates.”). Although “[s]uch statements often . . . appear in the claim’s preamble,” *In re Stencel*, 828 F.2d 751, 754 (Fed. Cir. 1987), a statement of intended use or purpose can appear elsewhere in a claim. *Id.*

*Relating To Anticipation/Obviousness*

"Both anticipation under § 102 and obviousness under § 103 are two-step inquiries. The first step in both analyses is a proper construction of the claims. . . . The second step in the analyses requires a comparison of the properly construed claim to the prior art." *Medichem, S.A. v. Rolabo, S.L.*, 353 F.3d 928, 933 (Fed. Cir. 2003) (internal citations omitted).

"[A]nticipation of a claim under § 102 can be found only if the prior art reference discloses every element of the claim . . . ." *In re King*, 801 F.2d 1324, 1326 (Fed. Cir. 1986) (citing *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458 (Fed. Cir. 1984)). "[A]bsence from the reference of any claimed element negates anticipation." *Kloster Speedsteel AB v. Crucible, Inc.*, 793 F.2d 1565, 1571 (Fed. Cir. 1986).

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987). Analysis of whether a claim is patentable over the prior art under 35 U.S.C. § 102 begins with a determination of the scope of the claim. We determine the scope of the claims in patent applications not solely on the basis of the claim language, but upon giving claims their broadest reasonable construction in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech.*



*Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). The properly interpreted claim must then be compared with the prior art.

Appellants have the burden on appeal to the Board to demonstrate error in the Examiner's position. See *In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) ("On appeal to the Board, an applicant can overcome a rejection [under § 103] by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness.") (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)). Therefore, we look to Appellants' Brief to show error in the proffered *prima facie* case. Only those arguments actually made by Appellants have been considered in this decision. Arguments which Appellants could have made but chose not to make in the Briefs have not been considered and are deemed to be waived. See 37 C.F.R. § 41.37(c)(1)(vii).

## VI. ANALYSIS

### *112, 2<sup>nd</sup> Rejection*

The Examiner found that the following words or phrases were not clearly understood and thus rendered the corresponding claims vague or indefinite:

- (a) "*a plurality of software packages*," in claim 1, line 6, and in claim 26, line 6 (i.e., not clearly understood if "a plurality of

software packages” is the same as “the plurality of software packages” referred to in the same claims, lines 3-4, and line 5);

- (b) “*each software package*,” in claims 21 and 46, line 2;  
“*a software package*,” in claims 21 and 46, lines 3-4; and  
“*another software package*,” in claims 21 and 46, line 5 (i.e., not clearly understood to which plurality of software packages this limitation is referring to);
- (c) “*the plurality of software packages*,” in claims 23 and 48, lines 1-2 (not clearly understood to which plurality of software packages this limitation is referring to);
- (d) “*a software package*,” in claims 24 and 49, line 1 (i.e., not clearly understood to which plurality of software packages this limitation is referring to);

(Ans. 3-4.)

- (e) “*a one’s complement checksum test of a software package’s program memory*,” in claims 3 and 28 (i.e., It is unclear how a checksum process can be applied on a memory of a computer system);

(Ans. 13-14.)

- (f) “*the presence of those software packages that are present*,” in claims 22 and 47, lines 1-2 (i.e., not clearly understood what “presence” is referring to, and where is the location of these

software packages to be detected, and which software packages are identified by “those”).

(Ans. 5.)

**In response to (a) above**, Appellants contend that “the second element of the claims has to be a subset of the ‘plurality of software packages’ referred to in the preamble since it is only these software packages that have assigned sequence of time intervals” (App. Br. 21). We disagree.

The *claims* measure the invention. *See SRI Int’l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (en banc). Our reviewing court has repeatedly warned against confining the claims to specific embodiments described in the specification. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (en banc). During prosecution before the USPTO, claims are to be given their broadest reasonable interpretation, and the scope of a claim cannot be narrowed by reading disclosed limitations into the claim. *See In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997); *In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989); *In re Prater*, 415 F.2d 1393, 1404-05 (CCPA 1969). “An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed, as much as possible, during the administrative process.” *In re Zletz*, 893 F.2d at 322.

Here, Appellants have chosen to use the *same* phrase, e.g., “*a plurality of software packages*,” to describe a limitation in the preamble and in describing the executing element, while alleging in the Brief that different software packages are being described. We find that using the same terminology to define different sets of software packages is ambiguous. Furthermore, claims 1 and 26 require that a sequence of time intervals be generated for *each* of the plurality of software packages, not merely a subset as argued by Appellants. Thus, we find no clear delineation in the claim language showing different subsets of software packages.

Therefore, we do *not* find that Appellants have shown error in the Examiner’s rejection of claims 1 and 26 as being vague or indefinite. Therefore, we affirm the rejection of independent claims 1 and 26 under 112, 2<sup>nd</sup> paragraph, and of claims 2-25 and 27-49, which fall therewith.

**In response to (b) above**, Appellants contend that “[s]ince claims 21 and 46 are limitations pertaining to the second element of claims 1 and 26 (i.e. they deal with execution of the software packages), it is clear that they must be associated with the ‘plurality of software packages’ that appears in the second element of both claims” (App. Br. 22: *see also* Reply Br. 3). We disagree.

As discussed *supra*, Appellants are attempting to distinguish between sets of software packages, yet we find no clear delineation being used in the claim language to show such sets. Instead, Appellants have left one to guess

as to which “plurality of software packages” applies to “each package,” “a software package,” and “another software package.” Here, either the preamble’s “*a plurality of software packages*” or the second element’s “*a plurality of software packages*” could reasonably pertain to the limitations recited in claims 21 and 46.

Therefore, we do *not* find that Appellants have shown error in the Examiner’s rejection of claims 21 and 46 as being vague or indefinite. Therefore, we affirm the rejection of claims 21 and 46 under § 112, 2<sup>nd</sup> paragraph.

**In response to (c) above**, again Appellants contend that “[c]laims 23 and 48 are obviously limitations of the second element of claims 1 and 26 respectively having to do with executing programs” (App. Br. 22; *see also* Reply Br. 3-4). We disagree for the same reasons provided *supra* regarding claims 1 and 26.

Therefore, we do *not* find that Appellants have shown error in the Examiner’s rejection of claims 23 and 48 as being vague or indefinite. Therefore, we affirm the rejection of claims 23 and 48 under § 112, 2<sup>nd</sup> paragraph.

**In response to (d) above**, Appellants similarly contend that “claims 24 and 49 . . . must be associated with the ‘plurality of software packages’ that appears in the second element of both claims” (App. Br. 23; *see also*

Reply Br. 4). We disagree for the same reasons provided *supra* regarding claims 1 and 26.

Therefore, we do *not* find that Appellants have shown error in the Examiner's rejection of claims 24 and 49 as being vague or indefinite. Therefore, we affirm the rejection of claims 24 and 49 under § 112, 2<sup>nd</sup> paragraph.

**In response to (e) above**, Appellants contend that “[b]y reading into computer memory *data* together with checksums and then reading out the *data* and checksums one can verify if errors have occurred in the read-in/read-out process” (Reply Br. 5, emphasis added).

While we agree that a checksum is a simple way to protect the integrity of data, we find that Appellants have failed to claim any such *data* checking procedure. Instead, Appellants' claim 3 merely recites a “. . . checksum test of a software package's program *memory*,” not the data in the memory. It is the hardware memory itself that Appellants' claim 3 is attempting to test, which is not the basis of a checksum test.

Therefore, we do *not* find that Appellants have shown error in the Examiner's rejection of claims 3 and 28 as being vague or indefinite. Therefore, we affirm the rejection of claims 3 and 28 under § 112, 2<sup>nd</sup> paragraph.

**In response to (f) above**, Appellants contend that regarding claims 22 and 47 “‘those software packages that are present’ is a newly-defined group of software packages . . . and needs no antecedent basis” (App. Br. 28).

The Examiner found that “[t]he term ‘those software packages that are present’ can be considered as software packages mentioned previously” (Ans. 14). We agree.

Contrary to Appellants’ argument that a newly-defined group of software packages is being recited, we agree with the Examiner that the term “those software packages” suggests previously mentioned packages. Furthermore, we find that the recited “*the presence* of those software. . .” also suggests a previously recited presence.

Antecedent basis must be laid for each recited element in a claim, typically, by introducing each element with the indefinite article (“a” or “an”). *See Slimfold Mfg. Co., Inc. v. Kinkead Properties, Inc.*, 626 F. Supp 493, 495 (N.D. Ga. 1985), *aff’d*, 810 F.2d 1113 (Fed. Cir. 1987) ( *citing* P. Rosenberg, 2 *Patent Law Fundamentals* § 14.06 (2d. Ed. 1984)). Subsequent mention of an element is to be modified by the definite article (“the”) or by “said” or “the said,” thereby making the latter mention(s) of the element unequivocally referable to its earlier recitation. *See id.*

Moreover, the USPTO in issuing patents is not required to interpret claims in the same manner as judges who, post-issuance, operate under the assumption the patent is valid. *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997). 35 U.S.C. § 112, second paragraph “puts the burden of precise claim

drafting squarely on the applicant.” *Id.* at 1056; *see also Halliburton Energy Servs. v. M-I LLC*, 514 F.3d 1244, 1255 (Fed. Cir. 2008) (noting that “the patent drafter is in the best position to resolve the ambiguity in the patent claims, and it is highly desirable that patent examiners demand that applicants do so in appropriate circumstances so that the patent can be amended during prosecution rather than attempting to resolve the ambiguity in litigation”). Correspondingly, even though indefiniteness in claim language is of semantic origin, it is not rendered unobjectionable simply because it could have been corrected. *See In re Hammack*, 427 F.2d 1384, 1388 n.5 (CCPA 1970).

Here, we find the Appellants have failed to use precise claim drafting in the above noted instances, hence instead tilting towards ambiguity. Therefore, we do *not* find that Appellants have shown error in the Examiner’s rejection of claims 22 and 47 as being vague or indefinite. Therefore, we affirm the rejection of claims 22 and 47 under § 112, 2<sup>nd</sup> paragraph.

In summary, we affirm the rejections of claims 1-49 under § 112, 2<sup>nd</sup> paragraph.

### *Grouping of Claims*

For the rejections under 102(b) and 103(a), we find that Appellants separately argue eight groups of claims as noted below:



As for group **I**, Appellants argue claims 1, 25 and 26 as a group (4<sup>th</sup> App. Br. 35-42). For claims 25 and 26, Appellants repeat the same argument made for claim 1. We will, therefore, treat claims 25 and 26 as standing or falling with claim 1.

As for group **II**, Appellants argue claims 8 and 33 as a group (4<sup>th</sup> App. Br. 43). For claim 33, Appellants repeat the same argument made for claim 8. We will, therefore, treat claim 33 as standing or falling with claim 8.

As for group **III**, Appellants argue claims 23 and 48 as a group (4<sup>th</sup> App. Br. 44). For claim 48, Appellants repeat the same argument made for claim 23. We will, therefore, treat claim 48 as standing or falling with claim 23.

As for group **IV**, Appellants argue claims 10 and 35 as a group (4<sup>th</sup> App. Br. 45-46). We find that claims 11 and 36 are similarly argued (4<sup>th</sup> App. Br. 48). We will, therefore, treat claims 11, 35, and 36, as standing or falling with claim 10.

As for group **V**, Appellants argue claims 13 and 38 as a group (4<sup>th</sup> App. Br. 48-50). We find that claims 14 and 39 are similarly argued (4<sup>th</sup> App. Br. 50-52). We will, therefore, treat claims 14, 38, and 39 as standing or falling with claim 13.

As for group **VI**, Appellants argue claims 18 and 43 as a group (4<sup>th</sup> App. Br. 52). For claim 43, Appellants repeat the same argument made for claim 18. We will, therefore, treat claim 43 as standing or falling with claim 18.

*See* 37 C.F.R. § 41.37(c)(1)(vii). *See also In re Young*, 927 F.2d 588, 590 (Fed. Cir. 1991).

*The Anticipation Rejections*

*Group I*

*Claims 1, 25, and 26*

We now consider the Examiner's rejection of claims 1, 25, and 26 under 35 U.S.C. § 102(b) as being anticipated by Blum.

Appellants contend:

Neither of the body elements of the claim at issue disclose either separately or in combination “*a method [1] for repetitively executing a plurality of software packages at one or more rates*”, and thus, these words represent an additional structural limitation which must be treated as a legitimate claim limitation and not merely “a statement of purpose or use.”

(4<sup>th</sup> App. Br. 37.) We disagree.

As noted *supra*, the preamble of a claim does not limit the scope of the claim when it merely states a purpose or intended use of the invention. Here, we find that the phrases “*at one or more rates*” and “*at a plurality of rates*” that appear only in the preamble of independent claims 1 and 26, respectively, merely state a purpose or intended use of the claimed “plurality of software packages.” As admitted by Appellants in the above noted arguments and acknowledged by us, the bodies of the respective claims neither repeat nor reference these functions. Because the language in the

bodies, standing alone, is clear and unambiguous in this case there is no compelling reason to give the above-noted phrases any weight.

Thus, we find that the phrases “*at one or more rate*” and “*at a plurality of rates*” recited *only* in the preamble will not limit the scope of the claims 1 and 26, respectively, because such statements do no more than define a context in which the invention operates.

Appellants further contend the following:

The pulse sequence generated in the Blum et al. invention (see Fig. 7, “clock pulse T”) does not correspond to Limitation [2] in that Blum et al.’s pulse sequence is a single sequence that is not assigned to any program. Each of Blum et al.’s pulses merely marks the end of one time slice interval and the beginning of the next. Limitation [2] claims a plurality of sequences, each sequence being assigned to each of a plurality of software packages.

(4<sup>th</sup> App. Br. 38.)

The Examiner found:

Blum et al teaches the operating time of the instruction execution unit is subdivided into a recurring set of time slice intervals (i.e., generating a sequence of time intervals). The first [sic] time slice in the set is assigned to a first program, the second time slice is assigned to a second program, and so on. (the time intervals are belonging to one software package not overlapping the time intervals belonging to any other of the plurality of software packages) . . . The instructions from the different programs are executed in an interleaved manner (i.e. executing a plurality of software packages, each software

package being executed during the time intervals of its sequence of time intervals) (col. 1, ll. 11-23; col. 3, ll. 35-54).

(Ans. 15-16.) We agree.

Initially, we find that contrary to Appellants' argument above, limitation [2] does *not* claim that each sequence is being *assigned* to each of a plurality of software packages. Instead, limitation [2] simply requires "*generating a sequence of time intervals for each of the plurality of software packages . . .*" There is no requirement that a particular sequence of time be assigned to a particular software package. As noted above, the Examiner has established that Blum discloses generating a recurring set of time slice intervals and assigning a time slice to a particular program in a non-overlapping manner. We also find that Blum clearly shows different programs (e.g., PGM 0, PGM 1, PGM 2) being assigned to execute during non-overlapping time intervals (e.g., time slice 1, 2, 3, 4, 5, 6) (FF 1).

Therefore, we do not find that Appellants have shown error in the Examiner's rejection of illustrative claim 1. Instead, we find the Examiner has set forth a sufficient initial showing of anticipation. Therefore, we affirm the rejection of independent claim 1 and of claims 25 and 26, which fall therewith.

*Group II*  
*Claims 8 and 33*

Appellants contend that “Blum et al. does not disclose a program being assigned its own dedicated memory region.” (4<sup>th</sup> App. Br. 43.) We disagree.

Blum discloses providing separate instruction address registers for each microprogram in the control storage 26 (FF 2). Thus, we find that the claimed “*software package is assigned its own dedicated memory region*” reads on Blum’s providing instruction address registers for each program in the control storage 26.

Therefore, we do not find that Appellants have shown error in the Examiner’s rejection of illustrative claim 8. Instead, we find the Examiner has set forth a sufficient initial showing of anticipation. Therefore, we affirm the rejection of claim 8 and of claim 33, which falls therewith.

*Group III*  
*Claims 23 and 48*

Appellants contend that “[n]othing is said in Blum et al. as to how the programs are compiled, linked, and loaded.” (App. Br. 44.)

The Examiner found that “Blum et al teaches programs are transfer [sic] to control storage (loading) and executed (col. 4, ll. 4-33) (compiling). Blum et al further teach pointer linking a program to be executed (col. 4, ll. 47-61)(linking).” (Ans. 17.) We agree.

Furthermore, we find that Blum discloses that the plurality of different programs are capable of being handled independently of each other (col. 4, ll. 14-17.) As such, we find that the claimed “*the plurality of software packages are independently compiled, linked, and loaded*” reads on Blum’s disclosures noted above.

Therefore, we do not find that Appellants have shown error in the Examiner’s rejection of illustrative claim 23. Instead, we find the Examiner has set forth a sufficient initial showing of anticipation. Therefore, we affirm the rejection of claim 23 and of claim 48, which falls therewith.

#### *The Obviousness Rejection*

We now consider the Examiner’s rejection of the claims under 35 U.S.C. § 103(a) as being obvious over Blum in view of Official Notice.

#### *Group IV Claims 10, 11, 35, and 36*

Appellants contend that “Blum et al. does not disclose anything relating to the performance of background and foreground tasks in executing a program.” (4<sup>th</sup> App. Br. 45.)

The Examiner found that “it is well known in the art of task management, and would have been obvious to one skilled in the art at the time of the invention to divide the tasks in the software packages to foreground tasks and background tasks . . .” (Ans. 7.)

Blum discloses that multiple tasks can be performed in a concurrent manner (FF 3). To complement this finding, the Examiner found that it is well known that such tasks could include foreground and background tasks. (Ans. 7.) Appellants further argue that “it is not common knowledge that background/foreground execution concepts are readily applied to complex multitasking systems such as the one described in Blum et al.” (4<sup>th</sup> App. Br. 46.) On page 18 of the Answer it was noted that the “Examiner is willing to provide support of the ‘official notice’ upon request from appellant.” Here we find that Appellants have challenged the Examiner’s ‘official notice’. However, the Examiner use of Official Notice is unsupported by documentary evidence as the Examiner has not offered any evidence tending to show that foreground/background tasks in the instruction execution modification mechanism of Blum would have been well known. We cannot say there are no background/foreground tasks in the prior art that operate in a fashion analogous to that required by the claim. However, we can only rule on the basis of the evidence that is provided in support of the rejection, and we find it deficient. The allocation of burdens requires that the USPTO produce the factual basis for its rejection of an application under 35 U.S.C. §§ 102 and 103. *In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984) (citing *In re Warner*, 379 F.2d 1011, 1016 (CCPA 1967)). The one who bears the initial burden of presenting a prima facie case of unpatentability is the Examiner. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

Therefore, we *do* find that Appellants have shown error in the Examiner's rejection of illustrative claim 10. Therefore, we reverse the rejections of claim 10 and of claims 11, 35, and 36, which fall therewith.

*Group V*  
*Claims 13, 14, 38, and 39*

The Examiner found that "Blum does not necessarily disclose a failure log . . . However, It is well known in the art of program execution" (Ans. 8).

Appellants contend that "Blum et al. does not disclose anything relating to maintaining a failure log." (4<sup>th</sup> App. Br. 48.) Appellants further contend that "it would not be unreasonable to expect the examiner to respond with concrete evidence in support of his position" (Reply Br. 16).

Here again, we find that Appellants requested that the Examiner provide evidence of the well known facts and the Examiner has failed to do so. As such, for reasons as presented *supra*, we *do* find that Appellants have shown error in the Examiner's rejection of illustrative claim 13.

Therefore, we reverse the rejection of claim 13 and of claims 14, 38, and 39 which fall therewith.

*Group VI*  
*Claims 18 and 43*

Appellants contend that "Blum et al. does not disclose anything relating to 'safety-critical' or 'non-safety-critical software' nor does Blum et



al[.] say anything about utilizing ‘partitions’ for the storage of programs.”  
(4<sup>th</sup> App. Br. 52-53.)

The Examiner found that “Blum discloses software packages are assigned own memory partitions . . . , but does not necessarily teach safety-critical and non-safety critical software. It would have been obvious to one skilled in the art at the time of the invention to place the safety-critical and the non-safety critical software in separate partitions” (Ans. 8.) We disagree.

While Blum discloses a large number of “storage locations” in its control storage 26, we do not readily find nor has the Examiner shown that Blum’s storage locations include “separate partitions” for the software programs. We give a narrower reading to the term “partitions” than to the phrase “storage locations”.

Therefore, we *do* find that Appellants have shown error in the Examiner’s rejection of illustrative claim 18. Therefore, we reverse the rejection of claim 18 and of claim 43, which falls therewith.

## VII. CONCLUSIONS

We conclude the following:

- (1) Appellants have *not* shown that the Examiner erred in rejecting claims 1-49 under § 112, 2<sup>nd</sup> paragraph;
- (2) Appellants have *not* shown that the Examiner erred in rejecting claims 1, 8, 23, 25, 26, 33, and 48 under § 102(b); and

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- (3) Appellants have shown that the Examiner erred in rejecting claims 10, 11, 13, 14, 18, 35, 36, 38, 39, and 43 under § 103(a).

#### VIII. DECISION

In view of the foregoing discussion, we affirm the Examiner's rejections under § 112, 2<sup>nd</sup> and § 102(b) and reverse the rejections under § 103(a).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv)(2007).

AFFIRMED

rwk

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